

**Western States VHF-Microwave Society**

PO Box 35 Lomita, CA 90717-0035

**RECEIVED**

**DEC 19 1994**

12-15-94

In the matter of

**FCC MAIL ROOM**

Allocation of Spectrum Below  
5 GHz Transferred from  
Federal Government Use

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ET Docket No. 94-32

**Introduction**

1. The Western States VHF-Microwave Society was formed several years ago to provide a common voice to express opinions and to demonstrate the interests of weak signal operators in our VHF through microwave spectrum in the Western area of the country. Some of our members have participated in every band planning session conducted in this area for more than a decade. Our membership now totals 151, from San Diego to Seattle, including Alaska and Hawaii, and continues to grow.

2. The Western States VHF-Microwave Society (WSVMS) has previously responded in this matter (6-13-94 attached) and at that time expressed our concern for sustaining the 2.3 GHz and 2.4 GHz spectrum for the Amateur Radio Service.

**Discussion**

3. This spectrum, 2300 to 2310 MHz and 2390 to 2450 MHz, is presently providing alternative growth areas for users of VHF and UHF frequencies where extreme congestion is the norm, especially here in the South Western United States. We recently lost 2 MHz of congested spectrum at 220 MHz. The migration to higher frequencies seems to be the only viable approach for the Amateur Radio Service to help VHF and UHF over-crowding. The loss of the 220 to 222 MHz has pushed this upward migration. Spectrum, mode-allocation and usage meetings are occurring frequently to try and solve interference problems. We are certainly making progress as a result of our efforts to maximize our spectrum usage efficiency, but there is a limit.

4. Unfortunately, unlike the commercial interests in spectrum, our population of the microwave bands is mainly dependent on a rather limited availability of either surplus equipment or a few individuals who sell or build a limited amount of equipment. The equipment that is presently in point to point linking use in this area is all surplus. That

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equipment cannot be easily replaced and the linking that is presently provided will be lost until new equipment can be designed and built, a costly and time consuming effort for non-profit amateur groups.

5. Obviously the general public does and will benefit from the improved technology as a result of any newly acquired spectrum, but it is indeed unfortunate it seems to continue to be at the expense of the Amateur Radio Service in every case.

6. What we feel is a bare minimal effort from the FCC would be a philosophy of "Leave the Amateur Radio Service some segments of spectrum in every microwave band and make the Amateur Radio Service primary". This would motivate more users to invest in equipment and commercial manufacturers to produce quality equipment for these bands. Recall how the commercial manufacturers of 220 to 225 MHz equipment ceased production under the first rumors of potential band loss by the ARS? The reverse of this is also true. We obviously don't need several hundred megaHertz of spectrum in each of our microwave bands but we do need spectrum for the public services which the Amateur Radio Service provides in these bands.

7. The initial loss of 2310 to 2390 MHz several years ago seems to have been unnecessary as the spectrum was never fully utilized. Why not offer portions of that area and give it to the commercial spectrum requestors? Since 2360 to 2390 MHz has not been considered by the commercial services it might be the ideal source for a solution to their problems without disrupting the Amateur Radio Service.

### **Recommendation**

8. We respectfully request at this time that the Amateur Radio Service be granted primary status from 2300 to 2310 MHz and 2390 to 2400 MHz and continue our secondary status in the remaining allocation.

We ask that you earnestly consider the needs of the Amateur Radio Service at this time and in the future.

Thank you

A handwritten signature in black ink, appearing to read 'E.R. Angle', written in a cursive style.

E.R. Angle  
representative for the WSVMS

# Western States VHF-Microwave Society

PO box 35, Lomita, CA 90717-0035

6-13-94

In the matter of:

Allocation of Spectrum Below  
5 GHz Transferred from  
Federal Government Use

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ET Docket No. 94-342

**RECEIVED**

**DEC 19 1994**

Mr. William F. Canton  
Acting Secretary  
Federal Communications Commission  
Washington, DC 20554

**FCC MAIL ROOM**

Re: Reallocation from government service to non-government service of spectrum shared with the Amateur Radio Service.

Dear Mr. Caton,

The Western States VHF-Microwave Society was formed several years ago to provide a common voice to express the opinions and to demonstrate the interests of weak signal operators of our VHF through microwave spectrum in the Western area of the country. Our membership now totals 147, from San Diego to Seattle, including Alaska and Hawaii, and continues to grow.

Every year at the West Coast VHF Conference we conduct a survey on matters affecting our VHF through microwave bands. This year, in addition to the written survey, a partial telephone survey of known Western 2.3 GHz users was taken to make better known present operating levels and future plans for use of the 2.3 to 2.45 GHz amateur band segments. This information was obtained in response to the NTIA task of finding shared government spectrum and it's effect on the Amateur Radio Service.

The American Radio Relay League informed the NTIA of present and future requirements for the Amateur Radio Service in the affected band segments but the NTIA did not adequately consider the impact on present users.

There are presently about four dozen active weak signal users of 2304 MHz in the Western portion of the country. These are SSB and CW users and intermittently operate during times of good tropospheric conditions and when activity will probably be high.

The amateur fast scan television community is a rapidly growing group of users as their present lower frequency allocations are becoming too congested. The ideal place for the wider bandwidth modes like video and data are in the microwave area and it is indeed gratifying to see more and more users adopt this in their systems as we have been advocating it for quite some time. It would indeed be unfortunate to see this trend reversed by the loss of key portions of our microwave spectrum allocations.

With extreme congestion on all of our VHF and UHF bands it is essential to maintain realistic spectrum for point to point linking. Many of the larger multi-repeater inter-tie systems are unable to find any frequencies for linking below one GigaHertz. New and old inter-tie systems are finding it necessary to expand upward in frequency to accommodate more users. The CMRA, California Microwave Relay Association ( operates more than fifteen interconnected repeaters near 1283 MHz ) has recently invested in a large quantity of commercial surplus 2.3 GHz equipment for the purpose of expanding all of it's linking capability. The Cactus Inter-tie System has been using several links on 2.3 GHz and has ongoing plans for expansion. The inadequate planning of our spectrum, that is, no provision for adequately spaced duplex frequency segments for linking, will adversely affect them as well as all future users of this and other microwave bands. It is for that reason we would like to retain some capability for duplex operation of point to point linking in the 2300 MHz and 2400 MHz areas.

While weak signal users in the ARS usually provide the first use of a microwave band segment we are not the largest nor the most consistent user of any particular band. A lot of the equipment and techniques which are ultimately incorporated by other users of the band are first developed in the weak signal community. This has been demonstrated many times over in the rapid growth of the 1240 to 1300 MHz amateur band. With over 120 NBFM repeaters, excluding linking, in operation in Southern California alone, the success of preamplifiers, filtering techniques and clean local oscillators were first demonstrated in the weak signal community long before commercial manufacturers started producing equipment for the band and their success is partly due to that demonstrated effort.

While the amateur radio satellite community is increasing it's use of the 2400 to 2402 MHz , it is satellite down links only at this moment with plans for uplinking on the next generation of satellites. That type of operation is several years away. Even now, there would be an unacceptable level of interference between the users of the satellite service and all other users that could not be tolerated in a shared segment. This has been proven time and again on our lower frequency bands.

While we in the Amateur Radio Service cannot provide the large revenues that potentially can come from commercial service allocations, we can and do provide important communications for public service, disasters, personal, educational and recreational activities.

Thank you for your consideration in this matter,



E.R. Angle  
representative for the WSVMS